

**Amendments to the Specification**

Please replace the paragraph beginning at page 4, line 3, with the following rewritten paragraph:

An improved design for this instrument, now marketed under the trade designation EN-BLOC® [[:]] by Neothemia Corporation of Natick Massachusetts, is described in United States Patent No. 6,471,659 by Eggers, et al., entitled "Minimally Invasive Intact Recovery Of Tissue", issued October 29, 2002. The EN-BLOC® instrumentation includes a tubular delivery cannula of minimum outer diameter, the tip of which is positioned in confronting adjacency with the target tissue volume to be removed. Such positioning is facilitated through the utilization of a forwardly disposed precursor electrosurgical electrode assembly. Located within the interior channel of this delivery cannula is a capture component configured with five relatively elongate thin leafs mutually interconnected at their base to define a pentagonal cross-sectional configuration. Each of the leafs terminates forwardly at a tip with a transversely bent eyelet structure. Slidably extending through each eyelet is an electrically conductive pursing cable of a pursing cable assembly, which extends to an attachment with another adjacent leaf tip. This cable extends rearwardly through a small guide tube attached to a leaf for connection with the slidable cable terminator component of a drive assembly. The drive assembly is driven forwardly by an electric motor through a translation assembly. By adjusting the location of a stop component, which engages the cable terminator component, the size of a captured specimen may be varied. For example, the device can be configured to recover tissue specimens of 10mm, 15mm, 20mm or 25mm effective maximum diametric extent. As the cable terminator component is pulled by the cable assembly into abutting engagement with the stop component, the cables are tensioned to draw the leaf eyelet structures together in a pursing action.

Please replace the paragraph beginning at page 12, line 5, with the following rewritten paragraph:

An assurance that the vacuum system is operating, at least to the extent that the vacuum pump assembly 52 is active, can be accomplished with a vacuum actuated switch (not shown) attached with the conduiting extending between the pump assembly 52 and the instrument 12. For example, unless such a switch is actuated, the commencement of a procedure can be logically blocked by the control assembly 70. In addition to the removal of smoke and such fluids as are discussed above, the evacuation ~~system~~ system, including pump assembly 72[[:]] and conduiting defining a transfer channel extending to the intake ports 38, functions to remove steam which is generated by the encounter of an electrosurgical cutting arc with fluid of tissue cells. This removal of steam (as a component of elevated temperature fluid) serves, *inter alia*, to protect healthy tissue surrounding the region of cutting from thermal trauma.

Please replace the paragraph beginning at page 13, line 26, with the following rewritten paragraph:

The procedure for installing the disposable component 16 within reusable component 14 involves the sliding of support housing 130 within the receiving cavity 140 and rotating grasping surface 134 of connector 26 to provide for the engagement of threads 132 with threads 142. Upon completing the assembly, the flexible transparent tube 40 of the evacuation assembly may be attached to an evacuation outlet 170 depending outwardly and in fluid and suction or vacuum communication with suction manifold 28. Finally, a tab at 172 is seen extending through a forward portion of the drive slot 156. This tab may be a component of a drive assembly safety stop functioning to limit the extent of forward travel permitted by the drive member component having the ears 160 and 162. It is located in accordance with a preselected capture component maximum effective diametric extent. Such a tab also may function as a capture complete stop which ~~serves~~ serves in the derivation of a capture complete signal derived as the current spike witnessed upon a stall of an electric drive motor. That signal is conveyed to control assembly 70.

Please replace the paragraph beginning at page 15, line 19, with the following rewritten paragraph:

Referring to Fig. 4, this capture component which is retained within the internal structure of cannula component 32 prior to its deployment is represented in general at 220 at a stage in its fabrication prior to the attachment of pursing cables and associated polymeric guide tubes for those cables. Component 220 is formed by chemically milling flat type 304 stainless steel sheet stock to provide for the ~~formation~~ formation of a pentagonal base portion represented generally at 222 which is weldably attached to the above-noted drive tube represented at 224. Drive tube 224 extends through the cannula component 32 and into the interior of cylindrical housing 130 (Fig. 2). Formed integrally with the base portion is a leaf assembly represented generally at 226. Looking additionally to Fig. 5, the sleeve assembly is seen to be comprised of leafs 228-232, a bending notch being chemically milled to define these leafs within the base portion 222 and each leaf having a chemically milled groove extending along its centrally disposed leaf axis. Such a leaf axis is seen in Fig. 4 at 234 with respect to leaf 228. Axis 234 extends to a tip region, for instance, that shown at 236 with respect to leaf 228. Looking additionally to Fig. 6A, tip region 236 of leaf 228 reappears at the noted stage of fabrication. The region 236 extends to a forward edge 238 which is seen to taper or slant inwardly toward the base portion 222 from a location of adjacency at 240 with the eyelet edge 242 of an eyelet structure represented in

general at 244a. Leaf edge 238 slants at an angle of  $53.5^\circ$  with respect to leaf axis 234. Eyelet structure 244a is seen to be formed having a cable-receiving aperture 246a as well as a cable tie-off aperture 248a positioned inwardly therefrom. Eyelet structure 244a extends in a widthwise sense from eyelet edge 242 to an oppositely disposed eyelet edge 252 to define a substantially constant width, W, (see Fig. 6C). Edge 252 is seen to be aligned and configured as an extension of a leaf side edge 254. Edge 254 is spaced from opposite leaf side edge 256 to define a leaf width. Note additionally, the presence of a centrally disposed chemically milled groove 258a.

Please replace the paragraph beginning at page 24, line 5, with the following rewritten paragraph:

Earlier leaf eyelet ~~structures~~ structures, which, at times, in very dense tissue experienced fold-back phenomena were twisted into perpendicularity with respect to an associated leaf face through utilization of a neck structure. Referring to Fig. 14A, a tip region 370 of a leaf according to the earlier design is illustrated prior to the formational step of twisting its eyelet structure to perpendicularity with the leaf face. The leaf itself was constructed as described above having the same width and thickness and being formed of the same type 304 stainless steel. Note, as before, that the forward edge 372 is slanted inwardly. The eyelet structure is represented generally at 374 and is seen to have an outer width retaining a cable receiving aperture and a tie-off aperture extending between an interior eyelet edge 376 and an aligned outward eyelet edge 378 which is aligned with leaf edge 380. Note, however, that the structure 374 has a necked down region 382 formed to facilitate its twisting into perpendicularity. As before, the leaf tip region is symmetrically disposed about a leaf axis 384 and the chemically machined groove for receiving a guide tube is shown at 386 being symmetrically disposed about that axis leaf. The width of the neck region 380 is identified as, W, for the analysis to follow. Looking to Fig. 14B, leaf 372 is shown to have an eyelet structure length, L, and the eyelet structure 374 is now twisted into perpendicularity at neck region 382. Fig. 14C is a side view of the leaf showing it to have a thickness, T. It may be noted that, as compared with the embodiment of Figs. 6A-6C, the larger diameter cable receiving aperture 388 is inboard of the smaller cable tie-off aperture 387.

Please replace the paragraph beginning at page 24, line 26, with the following rewritten paragraph:

The earlier leaf eyelet structure 374 was structurally analyzed along with the eyelet structure 244a shown in Fig. 6A-6C. Referring to Fig. 15A, the fixed end geometry of a model for structurally analyzing the embodiments of Figs. 6A-6C, and ~~7A-7C~~ 14A-14C is presented. A fixed leaf face is represented at 390, while the eyelet structure extending perpendicular thereto is represented at 392 having a length, L, and being offset with respect to the leaf axis by an angle,  $\phi$ . In the latter regard, a small initial bend due, for example, to assembly misalignment was assumed. As the leaf tip region advances into tissue, the leaf tip is assumed to be bent further through a range of angles,  $\varphi$  which was assumed to be 2.5° to 40°.

Please replace the paragraph beginning at page 25, line 32, with the following rewritten paragraph:

A = WT, the cross sectional area of the neck region 382 in the case of Figs. ~~7A-7C~~ 14A-14C and the width, W, in Figs. 6A-6C in square inches.

Please replace the paragraph beginning at page 26, line 23, with the following rewritten paragraph:

Looking at Table 1, the computed force, F, in pounds required to elastically deflect the eyelet structures represented in Figs. ~~7A-7C~~ 14A-14C and Figs. 6A-6C are set forth. Note, that for an offset value, C, of zero, the strength performance values of the eyelet structure of Figs. 6A-6C are almost twice those of Fig. ~~7A-7C~~ 14A-14C. Correspondingly, for an offset, C, value of 0.15 inch for the structure of Fig. ~~7A-7C~~ 14A-14C as compared with an offset, C, value in inches of 0.010 inch for the structure of Fig. 6A-6C again shows an improvement amounting to almost twice the eyelet structural capacity.

Please replace the paragraph beginning at page 27, line 19, with the following rewritten paragraph:

Referring to Fig. 17A, another embodiment for a leaf tip region and associated eyelet structure is presented. The tip region is represented in general at 430 as extending along a leaf axis 432 between leaf sides 434 and 436 to a forward edge 438. As before, a groove 440 is chemically milled in the leaf which is symmetrically disposed about leaf axis 432 and functions to support a cable guide channel having an outlet adjacent edge 438. An eyelet structure is represented in general at 442 in an orientation prior to its being bent or folded into perpendicular orientation with respect to the faces of the leaf. Bend line 444 is canted at an acute angle of 28° with respect to leaf axis 432. Eyelet structure 442 is configured with oppositely disposed eyelet

edges 446 and 448 to establish a constant eyelet width. Note that eyelet edge 448 is configured as an extension of coextensive leaf edge 436. Structure 442 is configured having an outboard cable receiving aperture 450 as well as an inboard tie-off aperture 452. Looking additionally to Figs. 17B and 17C, the eyelet structure ~~446~~ 442 is seen oriented perpendicularly to the faces of the leaf structure, the eyelet structure length, L, being identified in Fig. 17B and its width, W, and thickness, T, being identified in Fig. 17C. Note in the latter figure that the eyelet extends upwardly from the plane of the faces of the involved leaf at an acute angle  $\gamma$  of  $28^\circ$ .

Please replace the paragraph beginning at page 28, line 3, with the following rewritten paragraph:

Referring to Fig. 18A, another eyelet structure is revealed in conjunction with leaf tip region 460. The region 460 includes leaf sides 464 and 466 which extend symmetrically about leaf axis 462 and forwardly to a leaf forward edge 468. A groove 470 is chemically milled in one face of the leaf which is symmetrically disposed about leaf axis 462. For the present embodiment, an eyelet structure is represented generally at 472 having oppositely disposed eyelet edges ~~473~~ 472 and 474. The figure shows the eyelet prior to its being bent about a dashed bend line 476 into a perpendicular orientation. Bend line 476 is canted at an acute angle,  $\phi$  of  $22^\circ$ . Structure 472 includes an outwardly disposed cable receiving aperture 478 and an inwardly disposed tie-off aperture 480. In contrast to Fig. 17A wherein bend line 444 extends from forward edge 438 to leaf side 436, bend line 476 in Fig. 18A is seen to extend from a position upon eyelet edge 472 to leaf edge 466 which is coextensive with an aligned eyelet edge 474. Referring additionally to Figs. 18B and 18C, the forward region 460 is shown with the eyelet structure 472 having been bent upwardly to a perpendicular orientation with respect to the faces 482 and 484 of the leaf. Those faces are seen in Fig. 18C in conjunction of an identification of thickness, T. The figure also identifies the constant width, W, of the structure 472. Note in the figure that the structure 472 is canted upwardly with respect to the leaf faces at an acute angle,  $\gamma$  of  $22^\circ$ . Fig. 18B identifies the length, L, of the eyelet structure.

Please replace Table 1 on page 37, with the following rewritten table:

**Table 1**  
Force, F, (lbs) Required To Elastically Deflect Eyelet Structure

	Eyelet Structure Fig. 7 Figs. 14		Eyelet Structure Figs.6	
W	0.020 in	0.020 in	0.023 in	0.023 in
L	0.082 in	0.082 in	0.046 in	0.046 in
T	0.003 in	0.003 in	0.003 in	0.003 in
Sy	150000psi	150,000 psi	150,000 psi	150,000 psi
C	0 in	0.015 in	0 in	0.010 in
$\phi$	F	F	F	F
2.5	1.104	0.236	2.065	0.414
5.0	0.589	0.199	1.148	0.358
7.5	0.402	0.173	0.796	0.315
10.0	0.305	0.153	0.610	0.282
12.5	0.247	0.137	0.495	0.256
15.0	0.207	0.124	0.418	0.235
17.5	0.179	0.114	0.362	0.217
20.0	0.158	0.106	0.319	0.202
22.5	0.141	0.098	0.286	0.190
25.0	0.128	0.092	0.260	0.179
27.5	0.117	0.087	0.239	0.169
30.0	0.109	0.083	0.221	0.161
32.5	0.101	0.079	0.206	0.154
35.0	0.095	0.075	0.193	0.148
37.5	0.089	0.072	0.182	0.142
40.0	0.085	0.070	0.173	0.138